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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,081	07/08/2003	M. Mizanur Rahman	AB-336U	7989

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EXAMINER	
WIMER, MICHAEL C	
ART UNIT	**PAPER NUMBER**
2828	

DATE MAILED: 01/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/615,081	RAHMAN, M. MIZANUR	
	Examiner	Art Unit	
	Michael C. Wimer	2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 November 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3,5,13-15,22, 25-28 and 30-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villaseca et al. (6240317).

Regarding Claims 1-3,5,13-15,22,25-28 and 30-38, Villaseca et al. shows in Fig. 7, for example, an RF telemetry antenna system for communication between an external programmer and an implantable medical device, where the system comprises an implantable medical device 122 having a housing made of metal such as titanium and of a cylindrical form and defining an internal volume, and a dielectric housing portion 138 defining an internal volume, a self-resonating, monopole antenna 124,wire 134,136 with free end and connection end 126 contained within the internal volume defined by the dielectric portion 138, an internal TX/RX (col. 9, lines 15-26) operating in the 400 MHz. band and comprising a tissue stimulation circuit, where the antenna has an elongate form, folded at least once and conforms with the inside of the housing 138, and the connection end 126 has the shield 124 of the antenna connected to the conductive housing 122 defining a ground reference forming a ground plane as claimed. Therefore, the skilled artisan would have found it obvious that the

internal transceiver circuit is grounded to the housing, at least through the shield of the coax. However, a ground internal the housing, connected to the transceiver would have been obvious to the skilled artisan, in order to eliminate any ground loops and spurious radiation inherent in circuits.

Regarding Claims 2,3 and 14, the transceiver is formed on a p.c. board and the housing 138 is epoxy/plastic and the housing 122 is titanium.

Further regarding Claims 22 and 24, the particular geometry of an antenna and any change therein, is obvious to the skilled artisan. Thus, the skilled artisan would have found it obvious to employ the center conductor of the antenna that extends along the side of the housing back toward the feed point. Such an arrangement is dependent upon the radiation beam pattern desired, the impedance match and other radiation/antenna characteristics, particularly since no unexpected results are evident in the claims.

3. Claims 4,6-12,16-21,23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Villaseca et al. (6240317).

Regarding Claims 4,6-8 and 16-18, the permittivity value of 3.6 for the housing, specific wire composition, size and gauge therefor, are all obvious to the skilled artisan to achieve when selecting stock shelf materials in a particular design application used in the implantable device.

Regarding Claims 9,10,19,20,22 and 24, the shield 124 is disposed in an arc and the center conductor 134 is in a parallel arc, folded to provide maximum separation between housing and antenna.

Regarding claims 11 and 21, the frequency of operation is strictly an FCC-mandated allocation, made obvious by the skilled artisan using antenna frequency scaling.

Regarding Claims 12 and 23, shaping of the housing is always considered obvious to the skilled artisan to fit a particular environment, absent any unexpected results.

4. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Villaseca et al. (6240317) in view of Amundson et al. (6456256).

Regarding Claim 29, no specific teaching of "a spinal cord stimulation circuit" appears to be suggested in Villaseca et al. However, such a circuit within the housing falls under the class of implantable medical devices, taught by Villaseca et al. Amundson et al. teach that the implantable device disclosed thereby utilizes a curved/arcuate, monopole antenna with the housing used as a ground plane, where the antenna is connected to circuitry within the shielded housing for neuromuscular stimulation. Spinal cord stimulation falls under such use. Thus, it would have been obvious to the skilled artisan to include such circuitry in the housing of Villaseca et al.

Response to Arguments

5. Applicant's arguments filed 11/07/2005 have been fully considered but they are not persuasive. Specifically, the geometry of the antenna radiator, as in the reference to Villaseca, is always a matter of design choice and obvious and known that the folded antenna effects impedance and the radiation pattern, absent any unexpected results.

The issue of the ground reference involves a mere connection of the ground of the circuit connected to the conductive housing. At least the shield of the coax is connected to the housing, providing a positive ground connection to the circuitry. Since evidence of obviousness is shown in the reference, the rejections stand.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

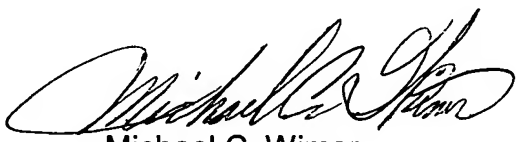
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Wimer whose telephone number is (571) 272-1833. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun O. Harvey can be reached on (571) 272-1835. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Wimer
Primary Examiner
Art Unit 2828

MCW
1/12/2006